<u>REMARKS</u>

With the above amendments, claims 1-2 and 4-20 remain in the application.
Claim 3 is hereby canceled without prejudice so as to facilitate allowance of the
remaining claims. Claim 1 is hereby amended. No new matter is being added.

<u>Claim Rejections 35 U.S.C. § 112</u>

Claim 3 is hereby canceled without prejudice to facilitate allowance of the
remaining claims. As such, the rejection of claim 3 under section 112 is now moot.

<u>Claim Rejection 35 U.S.C. § 103</u>

Claims 1-2 and 4-20 stand rejected as unpatentable over Acharya et al. (USP
6,094,508) in view of Bonneau et al. (USP 6,002,794). Applicants respectfully traverse
this rejection in regards to the claims as now amended.

Claim 1 as amended now recites as follows.

> 1.   A method for image processing, the method comprising:
> applying a **point-based threshold** function to identify candidate edge
> chains in an image being processed;
> determining a dynamic chain-based threshold function that is dependent
> on at least one characteristic of the image being processed;
> applying the **dynamic chain-based threshold** function to the candidate
> edge chains; and
> **removing** from a set of edge chains those candidate edge **chains** that fail
> to pass the dynamic chain-based threshold function.

(Emphasis added.)

As shown above, claim 1 now recites both a **point-based** threshold function to **identify**
(detect) candidate edge chains (i.e. whether or not a pixel belongs to a candidate edge
chain) and a **dynamic chain-based** threshold function to selectively filter the previously-
identified chains by "**removing** from a set of edge chains those candidate edge **chains**
that fail to pass the dynamic chain-based threshold function." The chain-based threshold

function is dynamically determined in that it is dependent on at least one characteristic of the image being processed.

The steps of claim 1 are supported in the present application by FIG. 2 and the description relating thereto. For convenience, FIG. 2 is reproduced below.
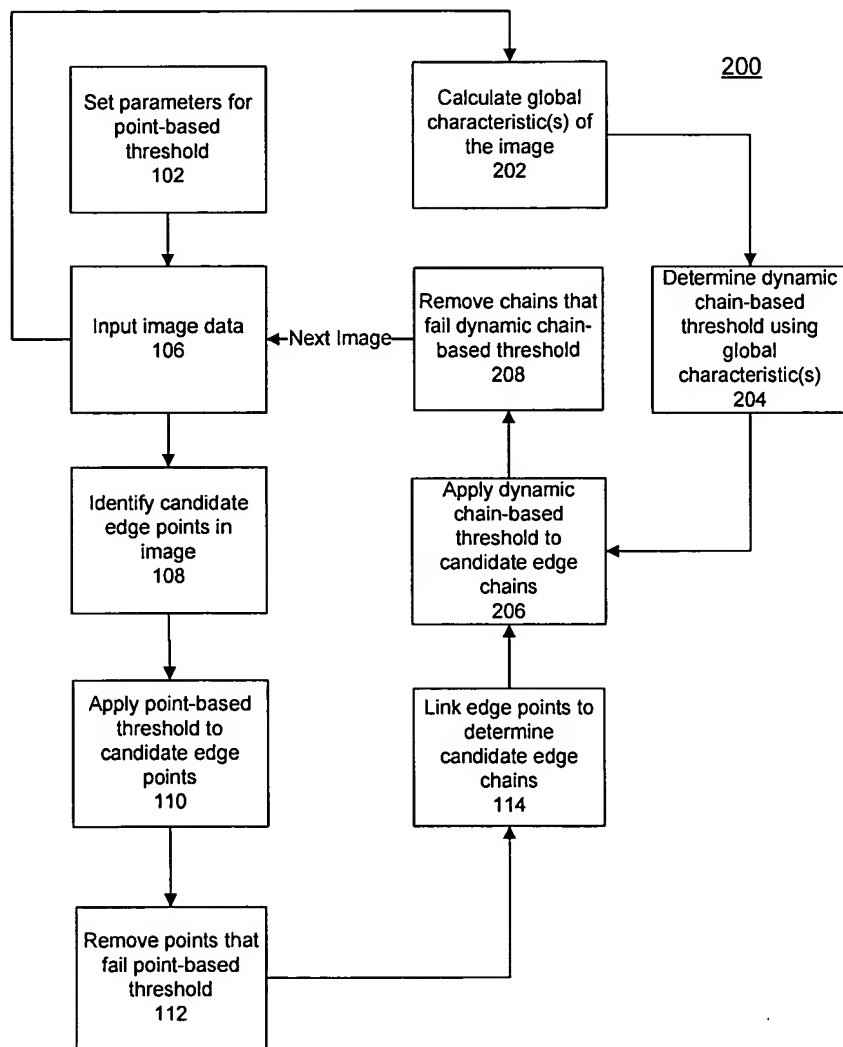

FIG. 2

In the above FIG. 2, the claimed step of applying the **point-based** threshold function is disclosed, for example, in block **110**, while the separate step of applying the dynamic **chain-based** threshold function is disclosed, for example, in block **206**. The step of

removing the **chains** that fail the dynamic chain-based threshold function is shown in block **208**.

Regarding Acharya et al, this citation discloses the use of a dynamic **point-based (pixel-based)** threshold function to **identify (detect)** the candidate chains (i.e. determines whether or not a pixel belongs to a candidate edge chain). For example, the Abstract of Acharya et al recites as follows.

> What is disclosed is a method for dynamically and automatically determining the threshold value for **edge detection** based on localized intensity information. **Each pixel can be assigned a threshold** to which its gradient or other intensity change information can be compared so as **to detect whether or not the pixel belongs to an edge feature of the image or not.** ...

(Emphasis added.)

As seen from the above, the dynamic threshold disclosed in Acharya et al relates to detecting **whether or not a pixel belongs to a candidate edge**. In other words, the threshold of Acharya corresponds to the **point-based** threshold applied in block **110** of FIG. 2 of the present application.

Acharya et al does <u>not</u> disclose or suggest the claimed dynamic **chain-based** threshold function to **selectively filter** the previously-identified **chains** by "**removing** from a set of edge chains those candidate edge **chains** that fail to pass the dynamic chain-based threshold function." (Emphasis added.) In other words, Acharya et al does <u>not</u> disclose or suggest the dynamic **chain-based** threshold applied in block **206** of FIG. 2 of the present application.

The citation in Bonneau et al relates to the identification of outside edges of objects (Column 18, lines 41-43). Like the Acharya et al citation, this citation relates to edge detection, not edge filtering. the Bonneau et al citation does <u>not</u> disclose or suggest the claimed dynamic **chain-based** threshold function to **selectively filter** the previously-identified **chains** by "**removing** from a set of edge chains those candidate edge **chains**

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that fail to pass the dynamic chain-based threshold function." (Emphasis added.) In other words, this citation does not disclose or suggest the dynamic **chain-based** threshold applied in block **206** of FIG. 2 of the present application.

Claims 2-8 depend from claim 1. As such, claims 2-8 are now patentably distinguished over the cited art for at least the same reasons discussed above in relation to claim 1.

Claim 9 is an apparatus claim which also recites application of a **dynamic chain-based** threshold function. Hence, for similar reasons as discussed above in relation to claim 1, claim 9 is now distinguished over the cited art.

Claims 10-18 depend from claim 9. As such, claims 10-18 are now patentably distinguished over the cited art for at least the same reasons discussed above in relation to claim 9.

Claim 19 is a method claim which also recites application of a **dynamic chain-based** threshold function. Hence, for similar reasons as discussed above in relation to claim 1, claim 19 is now distinguished over the cited art.

Claim 20 is a system claim which also recites application of a **dynamic chain-based** threshold function. Hence, for similar reasons as discussed above in relation to claim 1, claim 20 is now distinguished over the cited art.

Conclusion

For at least the above reasons, it is respectfully submitted that claims 1-2 and 4-20 are now patentably distinguished over the cited art.
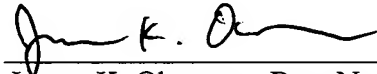
In particular, while the use of dynamic **point-based** thresholds to **identify (detect)** candidate chains are disclosed in the cited art, the claimed use of **dynamic chain-based** thresholds to selectively filter the previously-identified chains by "**removing** from a set of edge chains those candidate edge **chains** that fail to pass the dynamic chain-based threshold function" is neither disclosed nor suggested in the cited art.
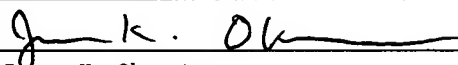
The Examiner is invited to telephone the undersigned at (408) 436-2111 for any questions. If for any reason an insufficient fee has been paid, the Commissioner is hereby authorized to charge the insufficiency to Deposit Account No. 50-2427.

Respectfully submitted,
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